

METHOD AND APPARATUS FOR INSPECTING A STRUCTURE
UTILIZING MAGNETICALLY ATTRACTED PROBES

ABSTRACT OF THE DISCLOSURE

5 An apparatus and method for inspecting a structure are provided in which
probes including respective sensing elements, such as ultrasonic transducers, are
disposed proximate the opposed surfaces of a structure, but only one of the probes
need be driven. In this regard, a tracking probe may be magnetically coupled to a
driven probe and move in coordination therewith. The apparatus and method can
10 therefore inspect structures in which one surface is inaccessible. The probes may
permit liquid to be bubbled between the ultrasonic transducer and the structure in
order to couple the ultrasonic signals. By utilizing a bubbled liquid as a couplant, the
apparatus and method may operate in an ultrasonic array mode. Additionally, the
probes may include at least one contact member, such as a plurality of wheels, for
15 contacting the structure in order to maintain the desired orientation and spacing of the
probes relative to the structure.

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